

In the Claims

1 (original)

An electrophoretic display fluid comprising charged pigment particles dispersed in a mixture comprising a perfluoropolyether and a hydrofluoropolyether.

2 (original)

The display fluid of Claim 1 wherein said perfluoropolyether is a homopolymer of trifluoro(trifluoromethyl)oxirane.

3 (currently amended)

The display fluid of Claim 1 wherein said perfluoropolyether is selected from the group consisting of Dupont K series or and Solvay Solexis HT series.

4 (currently amended)

The display fluid of Claim 3 wherein said perfluoropolyether is selected from the group consisting of Solvay Solexis HT170, HT200, HT230 and Dupont K6 and K7.

5 (currently amended)

The display fluid of Claim 1 wherein said hydrofluoropolyether is selected from the group consisting of Solvay Solexis ZT series.

6 (original)

The display fluid of Claim 5 wherein said hydrofluoropolyether is Solvay Solexis ZT180.

7 (currently amended)

The display fluid of Claim 1 wherein said mixture has a the weight ratio of said hydrofluoropolyethers to said perfluoropolyethers is from about 2/98 to about 98/2.

8 (currently amended)

The display fluid of Claim 7 wherein said weight ratio is from about 5/95 to about 50/50.

9 (currently amended)

The display fluid of Claim 8 wherein said weight ratio is from about 8/92 to about 30/70.

10 (original)

The display fluid of Claim 1 wherein said pigment particles are primary pigment particles or pigment-containing microcapsules or microparticles.

11 (original)

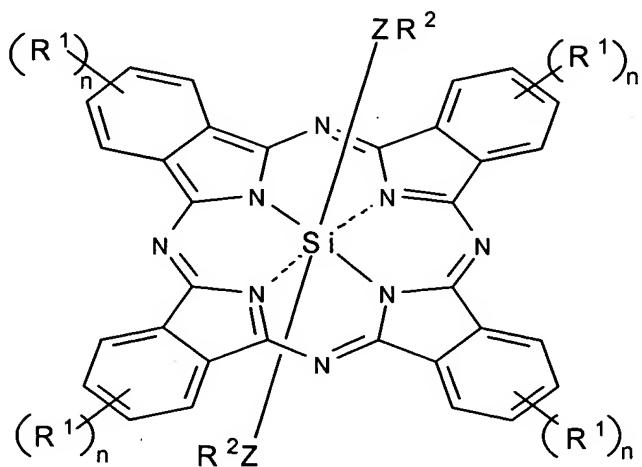
The display fluid of Claim 10 wherein said pigment is TiO₂, ZnO, or BaSO₄.

12 (currently amended)

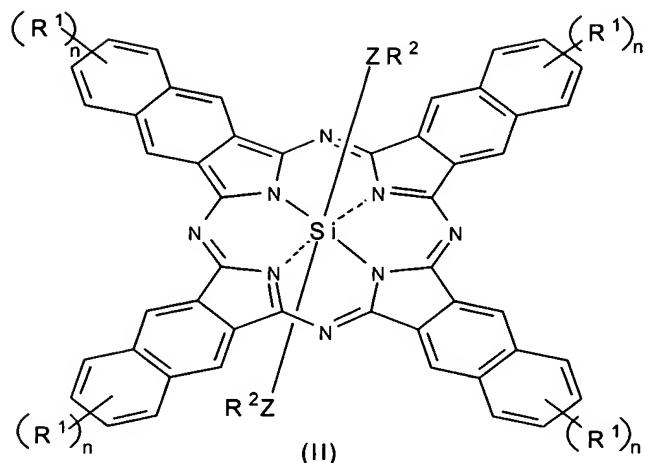
The display fluid of Claim 1 ~~wherein said solvent mixture comprises further comprising~~ a mixture of a Si phthalocyanine or naphthalocyanine dye and a Cu phthalocyanine or naphthalocyanine dye dissolved therein.

13 (currently amended)

The display fluid of Claim 12 wherein said Si phthalocyanine or naphthalocyanine dye is:



or



wherein:

each n is individually 0-4 for silicon phthalocyanine (I) or 0-6 for silicon naphthalocyanine (II);

R¹ is independently R_f—A— (wherein R_f is as defined below and A is a single bond, —CH₂O—, —CH₂CH₂O— or —CO—), alkyl, heteroalkyl, aryl, heteroaryl, heteroalkylaryl, alkyl-heteroaryl, heteroarylalkyl aryl-heteroalkyl, R'O—, R'S—, R'R''N—, R'CO—, R'OCO—, R'COO—, R'CONR''—, R'R''NCO—, R'NHCONR''—, R'SO₂NR''— or R'R''NSO₂— (in which R' and R'' are independently hydrogen, R_f (as defined below), alkyl, heteroalkyl, aryl, heteroaryl, heteroarylalkyl, aryl-heteroalkyl, heteroalkylaryl or alkyl-heteroaryl) or halogenated, particularly fluorinated derivatives thereof;

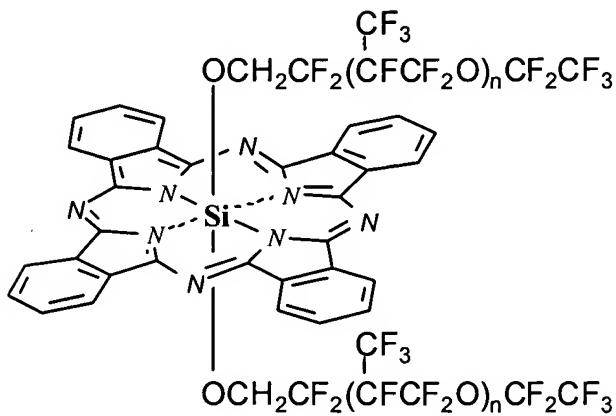
Z is O or NR' wherein R' is defined as above;

R² is hydrogen, R_f—B— (wherein R_f is as defined below and B is a single bond, —CH₂— or —CH₂CH₂—), alkyl, heteroalkyl or halogenated, particularly fluorinated derivatives thereof, or —SiR³R⁴R⁵ wherein R³, R⁴, and R⁵ are independently an alkyl or fluoroalkyl group of 1 to 20 carbon atoms or alkoxy or fluoroalkoxy of 2 to 40 carbon atoms; and

R_f is a low molecular weight (100-100,000) fluorinated polymeric or oligomeric moiety prepared from one or more types of fluorinated monomers.

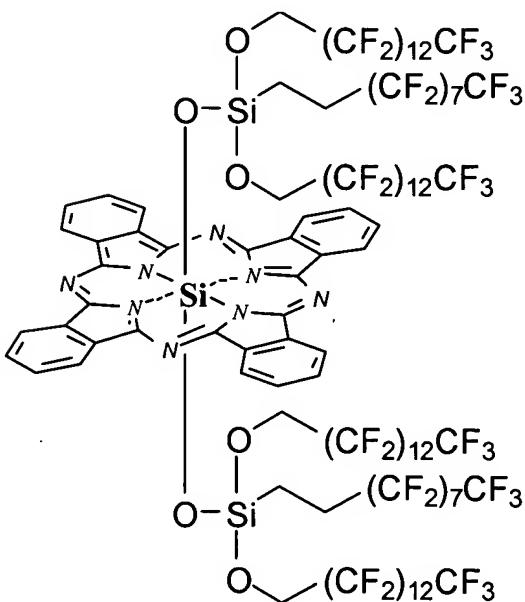
14 (original)

The display fluid of Claim 13 wherein said Si phthalocyanine dye is:



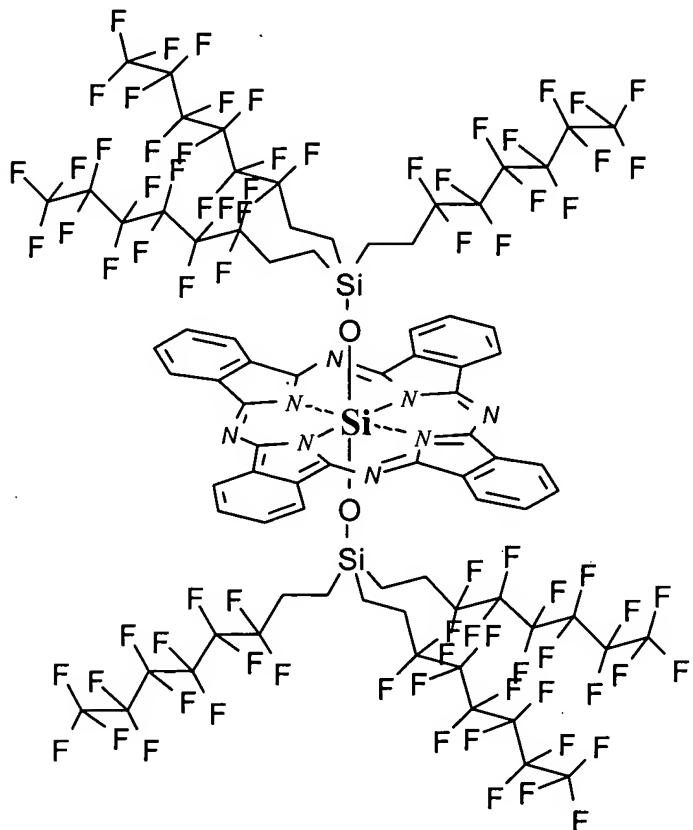
15 (original)

The display fluid of Claim 13 wherein said Si phthalocyanine dye is:



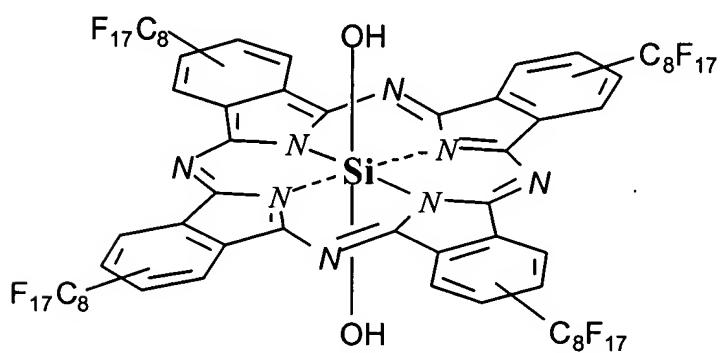
16 (original)

The display fluid of Claim 13 wherein said Si phthalocyanine dye is:



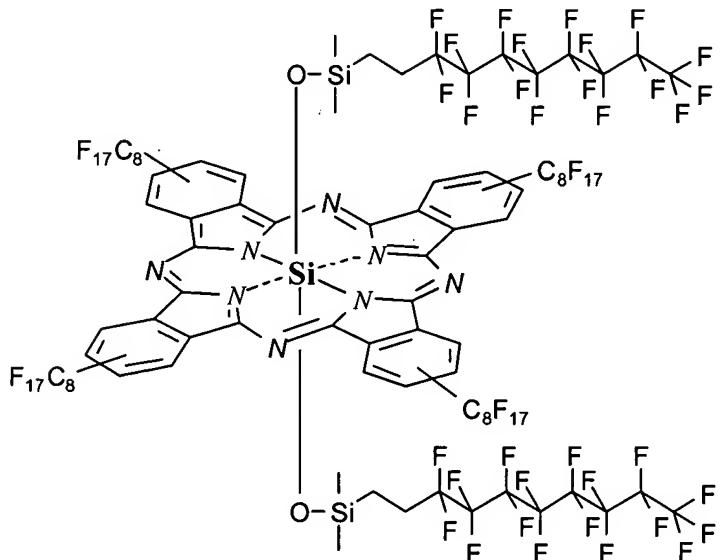
17 (original)

The display fluid of Claim 13 wherein said Si phthalocyanine dye is:



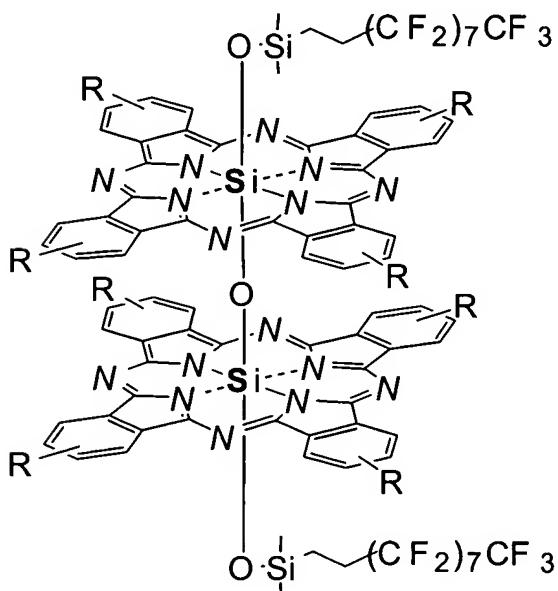
18 (original)

The display fluid of Claim 13 wherein said Si phthalocyanine dye is:



19 (original)

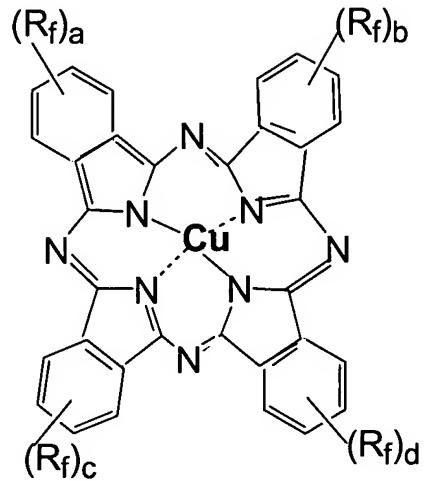
The display fluid of Claim 12 wherein said Si phthalocyanine dye is:



wherein R is H or $C_mH_nF_p$ in which m is 1-18 and $n+p \leq 2m+1$.

20 (original)

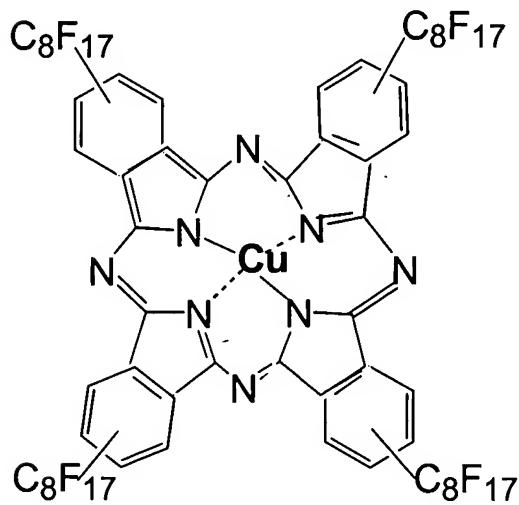
The display fluid of Claim 12 wherein said Cu phthalocyanine dye is:



CuPc-R_f
(a,b,c,d=0-4, a+b+c+d≥3)

21 (original)

The display fluid of Claim 20 wherein said Cu phthalocyanine dye is:



22 (original)

The display fluid of Claim 12 wherein the weight ratio of the Si dye to the Cu dye is from about 1/10 to about 10/1.

23 (original)

The display fluid of Claim 22 wherein said weight ratio of the Si dye to the Cu dye is from about 1/4 to about 4/1.

24 (original)

The display fluid of Claim 23 wherein said weight ratio of the Si dye to the Cu dye is from about 1/2 to about 2/1.

25 (original)

An electrophoretic display comprising display cells filled with an electrophoretic display fluid comprising charged pigment particles dispersed in a mixture comprising a perfluoropolyethers and a hydrofluoropolyether.

26 (currently amended)

The display fluid of Claim 25 wherein said perfluoropolyether is a homopolymer of [trifluoro(trifluoromethyl)oxirane].

27 (currently amended)

The display fluid of Claim 25 wherein said perfluoropolyether is selected from the group consisting of Dupont K series or and Solvay Solexis HT series.

28 (currently amended)

The display fluid of Claim 27 wherein said perfluoropolyether is selected from the group consisting of Solvay Solexis HT170, HT200, HT230 and Dupont K6 and K7.

29 (currently amended)

The display fluid of Claim 25 wherein said hydrofluoropolyether is selected from the group consisting of Solvay Solexis ZT series.

30 (currently amended)

The display ~~fluid~~ of Claim 29 wherein said hydrofluoropolyether is Solvay Solexis ZT180.

31 (currently amended)

The display of Claim 25 wherein said ~~solvent mixture comprises-electrophoretic display fluid further comprising~~ a mixture of a Si phthalocyanine or naphthalocyanine dye and a Cu phthalocyanine or naphthalocyanine dye dissolved therein.

32 (currently amended)

The display ~~fluid~~ of Claim 31 wherein the weight ratio of the Si dye to the Cu dye is from about 1/10 to about 10/1.

33 (currently amended)

The display ~~fluid~~ of Claim 32 wherein said weight ratio of the Si dye to the Cu dye is from about 1/4 to about 4/1.

34 (currently amended)

The display ~~fluid~~ of Claim 33 wherein said weight ratio of the Si dye to the Cu dye is from about 1/2 to about 2/1.

35 (currently amended)

The display of Claim 25 which is a conventional partition type display, ~~the a~~ display prepared by ~~the a~~ microencapsulation process or ~~the a~~ display prepared by the microcup technology.